

A New Species of *Microcylloepus* from Nevada (Coleoptera: Dryopidae)

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MICROCYLLOEPUS Hinton 1935

*Microcylloepus moapus*¹ sp. nov.

² *General*: a somewhat narrow, linear species; dorsum reddish-black, often obscured by a bluish-white powder, even in alcohol; color sometimes lightening to reddish-brown on posterior pronotum and anterior elytra. 1.7–1.9 mm. long; 0.7–0.8 mm. wide.

Head: round, compact, withdrawn beneath anterior margin of pronotum to posterior eye margins; surface minutely granulate; occiput, face (interocular space) and clypeus blackish-blue, granulate, in contrast to smooth, shiny black labrum. A thin silvery band is usually discernible across lower (ventral) end of clypeus (labro-clypeal band). Mouthparts and 11-segmented antennae yellowish; palpi white at sensory tips; antennae nearly equal to pronotal length; eyes whitish.

Pronotum: darker anteriorly (blackish, often with blue-white tinge), generally fading to reddish or yellowish brown on posterior half. Surface finely granulate; convex, and occasionally somewhat shiny anteriorly, flattened posteriorly. Lateral longitudinal carinae distinct for entire pronotal length, more or less bisinuate following outlines of lateral edges. Posterior disc bearing a readily detectable "Y"-shaped ridging, the handle of the "Y" generally more easily seen than the forks. Edges sinuate on all sides except anterior, which is smooth across front, terminating in the antero-lateral angles which are abruptly produced forward into short, blunt angles; lateral edges bisinuate, the anterior sinuosity slightly weaker and shorter than pos-

¹ From the Piute word "moapa," meaning "muddy"; the Warm Springs area in northern Clark County is the source of the Moapa River.

² The following description is based entirely on alcoholic material. In dried specimens, the true color pattern is badly obscured by pile and a coating of bluish-white powder.

terior; greatest pronotal width across posterior lateral sinuities; tuberculations of lateral edges give the effect of very weak serrations under strong magnification. Postero-lateral angles weakly acute, much less spinous than antero-lateral angles. Sinuosity of posterior margin in the form of an unstrung long-bow. Base- and apex-widths about equal.

Elytra: essentially unicolorous brown- to reddish-black, often lightening anteriorly. Color occasionally obscured somewhat by bluish-white powder. Surface weakly costate and coarsely punctate, punctures arranged in longitudinal series—the whole distinctly producing an appearance of roughness. Costae IV and V evident under strong power; the longest (V) originates ventrad to umbonal area and extends caudad nearly to elytral apex; Costa IV originates across top of umbonal area, curves away from, then toward, Costa V, disappearing in posterior third of elytra. Both costae are resolved into lines of closely set tubercles under high power. The tiny, rounded scutellum may be inconspicuously the same color as surrounding elytra, or may stand out weakly by virtue of being a bit lighter in color. Elytral sides straight and slightly divergent in anterior third, thence evenly rounded to apices. Humeral angles well rounded. Wings small, nonfunctional, reduced to one-third elytral length.

Venter: yellow-brown to deep reddish, nearly always blackish along prothoracic collar. Conspicuous short, white pile present, most noticeably along metasternal and abdominal edges in alcoholic material. Surface weakly granulate but not particularly roughened.

Legs: from dorsal aspect, in approximately the normal walking position (in which stance these animals characteristically die in alcohol), femora are typically blackish at apices, yellow or brown inwardly; tibiae blackish, lightening in color at both ends; tarsi yellowish. Ventrally, femora lighter proximally.

Genitalia: see fig. 1.

Type locality: NEVADA, Clark County (*Warm Springs* (Big Pool and its outlet streams), 26–27 (xii) 48, el. 1,700 ft., LaR.). Known only from the type locality.³

³ For a more comprehensive description of the type locality, see Reference No. 3.

Types: in the author's collection; paratypes in the collections of California Academy of Sciences, U. S. National Museum, American Museum of Natural History, British Museum (Natural History) and the Paris Museum.

Microcylloepus moapus seems closest to *M. thermarum* (Darlington) 1928 (*Helmis*) described from "Hot Spring no. 15;

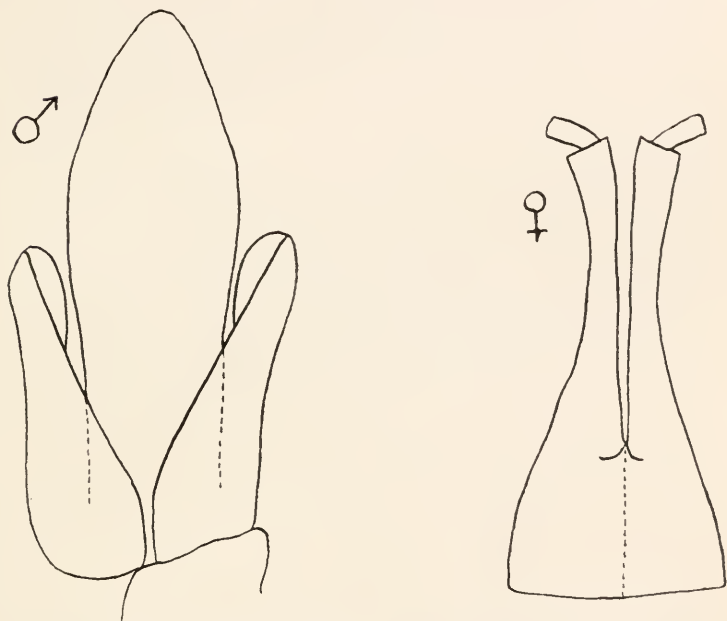


FIG. 1. Male and female genitalia of *Microcylloepus moapus* sp. nov. (holo- and allotypes, respectively).

Opal Mine 25 mi. So. Denio, Ore.," from some of Dr. C. T. Brues' material. Actually, the type locality of *M. thermarum* is some 25 miles within Nevada, since Denio is a bordertown. *M. moapus* differs from *M. thermarum* in being slightly more robust, particularly about the elytra, and in having a pronounced constriction of the pronotum near base, where pronotal sides narrow distinctly before sweeping out to form the postero-lateral angles. This is lacking in *M. thermarum*, the posterior sinuosity

curving inwardly smoothly to the postero-lateral angle without such a constriction. These two species constitute a small but distinct group among the *Microcylloepi* known to me by virtue of the very long and comparatively narrow pronotum. The Hintonian *M. angustus* from south-central Mexico (District of Temascaltepec) at an elevation of 5,600 feet may form a third link in this group-chain, although I can base my opinion only on Hinton's statement that *M. angustus* "most nearly resembles *M. thermarum* (Darlington) of Oregon, but may be distinguished by having the inner sublateral carinae of the elytra moderately prominent and extending to apical half, whereas in *thermarum* the inner sublateral carinae are absent or scarcely visible" (1940). I have not seen the species, but its described flightlessness is in accord with one of the group's dominant characteristics. Our species are known only from thermal waters, but no mention is made by Hinton of temperature conditions surrounding the types of *M. angustus*.

Merely as a preliminary statement, I do not anticipate at the moment that the *Microcylloepi* will be of primary aid in deciphering the most important of the perplexing mysteries of stream growth and pattern-change which still shroud our basic understanding of the geohydrography of the Great Basin. This statement I can apply, and then, as indicated, only preliminarily, to the thermal species known to me. Cooler waters may show a different picture, but it is possible that the unique similarities between many thermal waters in Nevada may be such as to produce little recognizable change in isolated populations of a given stock, except over very long periods of time—and of course, the longer the time-periods involved, the more it is likely that any changes would be due to gradual alterations in the thermal environment rather than merely to the element of time *per se* allowing random perfection of genetic tendencies. There is no doubt that *M. moapus* and *M. thermarum* are close, and it is quite possible that intervening forms may come to light in future and show the whole to be one intergrading series of populations. With present knowledge, however, they are distinct enough to be readily separable.

From the larger and more widespread *Microcylloepus similis* (Horn) 1870, which occurs with it, *M. moapus* may be easily differentiated by the wing characteristics. *M. similis* possesses large wings which reach at least to abdominal apices in contrast to the reduced flight stubs of *M. moapus*.

Since not enough material of *M. thermarum* is available at present for dissection, it is impossible to compare genitalia and wing conditions between the two species.

***Microcylloepus moapus fraxinus* subsp. nov.**

Identical to the typical subspecies but more robust in form and slightly longer, a difference hardly detectable unless side-by-side comparison can be made. Lateral pronotal and elytral serrations are also slightly stronger and more marked. The most prominent distinguishing characteristic lies in the wing structure. In *M. m. moapus*, the wings are greatly reduced, never exceeding one-third the abdominal length; *M. m. fraxinus* possesses less reduced wings which reach caudad just slightly more than half the abdominal length. There are no detectable differences in genitalia.

Type locality: NEVADA, Lincoln County (Ash Springs (Pah-ranagat Valley), outlet streams, 28(xii)48, el. 3,750 ft., LaR.). Known only from the type locality. Ash Springs is some 55 airline miles north of Warm Springs. Both lie on the course of Pleistocene White River, but are no longer directly connected. The widespread *M. similis* seems distributed along the entire course of Pleistocene White River, being found associated with both subspecies of *M. moapus*, as well as occurring seemingly by itself at Hiko Spring, several miles north of Ash Springs.

Types: in the author's collection.

REFERENCES

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